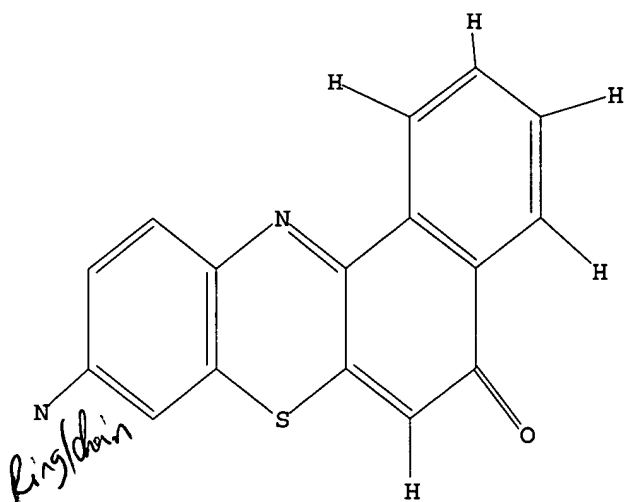


## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	62	544/31	US-PGPUB; USPAT	OR	OFF	2006/06/09 13:07

✓ Ring not isolated



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 13:18:20 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 19 TO ITERATE

100.0% PROCESSED 19 ITERATIONS 1 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 119 TO 641  
PROJECTED ANSWERS: 1 TO 80

L2 1 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 13:18:26 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 483 TO ITERATE

100.0% PROCESSED 483 ITERATIONS 2 ANSWERS  
SEARCH TIME: 00.00.01

L3 2 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
166.94	167.15

FULL ESTIMATED COST

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=> s l3

L4                    5 L3

=> d ibib abs hitstr tot

## L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

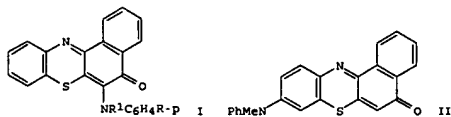
ACCESSION NUMBER: 2003:591159 CAPLUS  
 DOCUMENT NUMBER: 139:157136  
 TITLE: Nile red type compound emitting red light, process for producing the same, and luminescent element utilizing the same  
 INVENTOR(S): Nakaya, Tadao; Tajima, Akio; Saikawa, Tomoyuki; Takano, Shinji; Yamauchi, Takao; Mori, Hidemasa  
 PATENT ASSIGNEE(S): Taiho Industries, Co. Ltd., Japan  
 SOURCE: PCT Int. Appl., 112 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003062213	A1	20030731	WO 2003-JP477	20030121
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2003277371	A2	20031002	JP 2002-14881	20020123
JP 2004018400	A2	20040122	JP 2002-172127	20020612
JP 2003277369	A2	20031002	JP 2003-12498	20030121
EP 1475372	A1	20041110	EP 2003-701142	20030121
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1620441	A	20050525	CN 2003-802508	20030121
US 2005113575	A1	20050526	US 2003-501398	20030121
PRIORITY APPLN. INFO.:			JP 2002-12222	A 20020121
			JP 2002-12224	A 20020121
			JP 2002-14881	A 20020123
			JP 2002-172127	A 20020612
			JP 2001-313245	A 20011010
			WO 2003-JP477	W 20030121

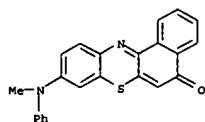
OTHER SOURCE(S): MARPAT 139:157136  
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## L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

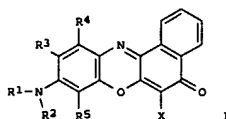
ACCESSION NUMBER: 1985:406289 CAPLUS  
 DOCUMENT NUMBER: 103:6289  
 TITLE: Study of the chemistry of heterocyclic quinonimines. 6. Direct amination of benzo[a]phenothiazin-5-one by aromatic amines  
 AUTHOR(S): Afanas'eva, G. B.; Vysokov, V. I.; Chupakhin, O. N.; Ufimskaya, I. S.  
 CORPORATE SOURCE: Ural. Politekh. Inst., Sverdlovsk, 620002, USSR  
 SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1985), (1), 49-52  
 CODEN: KGSSAQ; ISSN: 0453-8234  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 OTHER SOURCE(S): CASREACT 103:6289  
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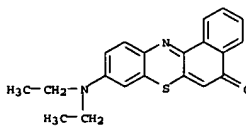
AB Benzophenothiazinones I (R = H, Cl, Br, OMe, Me, R1 = H; R = H, R1 = Me, Et) were prepared from benzo[a]phenothiazin-5-one by amination with p-RC6H4NHR1 in DMF containing concentrated HCl for 30 h; I (R = H, R1 = Me) was also obtained by treating 2-chloro-3-(N-methylanilino)-1,4-naphthoquinone with the Zn salt of o-aminothiophenol. Addnl. obtained was benzophenothiazinone II.  
 IT 96691-46-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)  
 RN 96691-46-2 CAPLUS  
 CN 5H-Benzo[a]phenothiazin-5-one, 9-(methylphenylamino)- (9CI) (CA INDEX NAME)



## L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



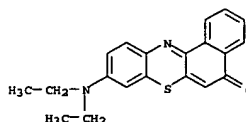
AB The invention relates to a Nile red-based red-emitting compound represented by I [R1-2 = H and alkyl; R3(R5) = H and may combine with R1(R2) to form a ring; R4 = H and may combine with R3 to form a ring; X = H, halo, and -CH(CN)Ar]. The compound is suited for use as a red-emitting material in an organic light emitting device.  
 IT 74682-48-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (nile red type compound for red-emitting organic LED)  
 RN 74682-48-7 CAPLUS  
 CN 5H-Benzo[a]phenothiazin-5-one, 9-(diethylamino)- (9CI) (CA INDEX NAME)



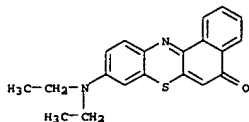
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

## L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1984:195085 CAPLUS  
 DOCUMENT NUMBER: 100:195085  
 TITLE: Dyestuff lasers and light collectors - two new fields of application for fluorescent heterocyclic compounds  
 AUTHOR(S): Raue, Roderich; Harnisch, Horst; Drexhage, Karl H.  
 CORPORATE SOURCE: Bayer A.-G., Leverkusen, D-5090, Fed. Rep. Ger.  
 SOURCE: Heterocycles (1984), 21(1), 167-90  
 CODEN: HETCYM; ISSN: 0385-5414  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Phys. principles and methods of the functioning of fluorescent solar collectors and dye lasers are discussed, together with the demands that have to be met by a fluorescent dye. A report is given of perylene carboxylic ester dyes and perylene tetracarboxylic acid diimide dyes for solar collectors, bifluorophoric laser dyes, laser dyes with intramol. triplet quenching, and IR dyes with pyrylium and thiopyrylium terminal systems, also from the tetra and hexamethine hemicyanine ranges. The effect of cyanogen substitution on the fluorescence quantum yield in coumarin and xanthene dyes was studied. Among the coumarin dyes are compds. suitable as energy converters in light-collecting systems, especially if the amino group is fixed by ring closure to the aromatic system as high-power laser dyes.  
 IT 74682-48-7  
 RL: USES (Uses) (for lasers and solar collectors, properties of)  
 RN 74682-48-7 CAPLUS  
 CN 5H-Benzo[a]phenothiazin-5-one, 9-(diethylamino)- (9CI) (CA INDEX NAME)



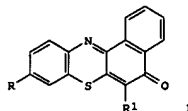
L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1982:53801 CAPLUS  
 DOCUMENT NUMBER: 96:53801  
 TITLE: Oxidative coupling of CH-acid compounds with p-phenylenediamines. VIII. Synthesis of SH-benzo[a]phenothiazin-5-ones from naphth[2,1-d]-1,3-oxathiol-2-ones  
 AUTHOR(S): Mann, G.; Wilde, H.; Hauptmann, S.; Lehmann, J.; Naumann, M.; Lepom, P.  
 CORPORATE SOURCE: SEKT. CHEM., KARL-MARX-UNIV., LEIPZIG, GER. DEM. REP.  
 SOURCE: Journal fuer Praktische Chemie (Leipzig) (1981), 323(5), 785-92  
 CODEN: JPCEAO; ISSN: 0021-8383  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 OTHER SOURCE(S): CASREACT 96:53801  
 AB Reaction of 5-hydroxynaphth[2,1-d]-3-oxathiol-2-ones with N,N-diethylquinone-1,4-diimines gives 5H-benzo[a]phenothiazin-5-ones.  
 The same dyes are available by use of p-substituted nitrosobenzenes in HOAc, or in MeOH in the presence of O acceptors. The mechanisms of dye formation are discussed.  
 IT 74682-48-7P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and spectra of)  
 RN 74682-48-7 CAPLUS  
 CN 5H-Benzo[a]phenothiazin-5-one, 9-(diethylamino)- (9CI) (CA INDEX NAME)



L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1980:515943 CAPLUS  
 DOCUMENT NUMBER: 93:115943  
 TITLE: Thiazine dyes  
 INVENTOR(S): Mann, Gerhard; Hauptmann, Siegfried; Wilde, Horst; Lehmann, Joachim; Naumann, Manfred  
 PATENT ASSIGNEE(S): Ger. Dem. Rep.  
 SOURCE: Ger. (East), 9 pp.  
 CODEN: GEXXA8  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 139269	Z	19791219	DD 1978-208539	19781019
PRIORITY APPLN. INFO.:			DD 1978-208539	A1 19781019

GI



AB Thiazines I (R = auxochromic group; R1 = alkyl, aryl, acyl, optionally substituted heterocyclic group, substituted mercapto or amino), hydrolysis-resistant magenta dyes showing no secondary absorption in the 400-500 nm range, are prepared by reaction of a 5-hydroxynaphth[2,1-d]-1,3-oxathiol-2-one derivative or its 4-substituted analog with a p-nitroso-N,N-dialkylaniline in the presence of an oxygen acceptor or with a dialkyl-p-phenylenediamine under oxidative conditions. Typical of the dyes prepared are I (R = Et2N, R1 = H) [74682-48-7],  $\lambda_{max}$  560 nm,  $\log \epsilon$  4.38, and I (R = Et2N, R1 = PhNHC=O) [74682-49-8],  $\lambda_{max}$  600 nm,  $\log \epsilon$  4.71. Four other I were prepared  
 IT 74682-48-7P  
 RL: IMF (Industrial manufacture); PREP (Preparation) (photog. dye, preparation and spectrum of)  
 RN 74682-48-7 CAPLUS  
 CN 5H-Benzo[a]phenothiazin-5-one, 9-(diethylamino)- (9CI) (CA INDEX NAME)

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

